

Dear 3DV reviewers,

We extend our sincere appreciation for dedicating your time and expertise to the review of our work.

In the previous submission, we received valuable feedback regarding mainly three aspects: 1) the motivation behind the multi-level sets was not clear, 2) qualitative comparison shows that the reconstructed surfaces for translucent objects still appear to be quite distorted, and 3) our method is only compared with general surface reconstruction methods, instead of reconstruction methods designed for translucent surfaces.

In response to those helpful feedback, we have addressed the concerns raised:

- 1) We elaborate on the reasonings behind the usage of multi-level sets between line 278 – 291, and empirically show that incorporating multi-level sets improves the reconstructions quantitatively (Table 2) and qualitatively (Supplementary Figure 9). We also explain in detail how the number of value of level sets are selected in Sec 4.2 and supplementary Sec B.2.
- 2) Significant improvements have been made to the regularizations applied to translucent scenes, resulting in superior reconstruction quality compared to the previous version. Given the inherently challenging and ill-posed nature of reconstructing translucent surfaces from RGB images alone, some artifacts, such as unsmooth surfaces, may still be present. Regardless, we would like to underscore that **our method significantly outperforms existing methods**, suggesting that the **proper decoupling of geometry and material is necessary** for reconstructing translucent and blending thin surfaces from images. We hope that our work will point out a promising direction for future research to further enhance the reconstruction quality of translucent surfaces.
- 3) We included comparison with NeRRF, a very recent method that reconstructs surfaces of translucent objects from RGB images and mask supervision. Note that our method does not require mask supervision.

Sincerely yours,

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